FILE 'PCTFULL' ENTERED AT 14:08:41 ON 24 JUN 2002
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= s l1 and protecting
L3   5 FILE USPATFULL
L4   0 FILE MEDLINE
L5   2 FILE IFIPAT
L6   0 FILE USPAT2
L7   1 FILE CAPLUS
L8   1 FILE WPIDS
L9   0 FILE EUROPATFULL
L11   1 FILE PATOSWO
L10   1 FILE PCTFULL

TOTAL FOR ALL FILES
L11   11 L1 AND PROTECTING

= dup rem l11
PROCESSING COMPLETED FOR L11
L12   7 DUP REM L11 (4 DUPLICATES REMOVED)

= d l12 1-7 ibib abs

L12 ANSWER 1 OF 7 USPATFULL   DUPLICATE 1
ACCESSION NUMBER: 2002:126323 USPATFULL
TITLE: **Purification** of human **troponin**
                         I
INVENTOR(S):   Conn, Gregory, Cary, NC, UNITED STATES
                         Reardon, Brian, Seattle, WA, UNITED STATES
                         Zong, Xianfang, Northborough, MA, UNITED STATES
                         Zhang, Chenming, Blacksburg, VA, UNITED STATES
PATENT ASSIGNEE(S):   Diosynth RTP, Inc. (U.S. corporation)

                              NUMBER   KIND   DATE
                         -------------------- ------ --------
PATENT INFORMATION: US 2002064835   A1   20020530
APPLICATION INFO.:   US 2001-903398   A1   20010710 (9)

                                NUMBER   DATE
                         -------------------- --------
PRIORITY INFORMATION: US 2000-217069P   20000710 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY,
                         10022
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 566
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB   The invention is directed to methods for purifying **Troponin**
         I, particularly recombinant Tropnin I produced in a bacterial
         expression system. Recombinant Tropnin I can be advantageously purified
         after reversibly **protecting** the free **sulfhydryl**
         groups, e.g., by forming sulfates. In a specific example, Tropnin I
         reacted with sodium tetrathionate yielded sulfitolyzed Tropnin I, which
         was purified by chromatography on an anion exchanger, followed by
         hydrophobic interaction chromatography. Facile deprotection of the
         sulfhydryl groups yields a highly purified product ready for
         refolding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 2 OF 7 USPATFULL   DUPLICATE 2
ACCESSION NUMBER: 2002:105940 USPATFULL

TITLE: **Purification** of human **troponin I**

INVENTOR(S): Conn, Gregory, Cary, NC, UNITED STATES
Reardon, Brian, Seattle, WA, UNITED STATES
Zeng, Xianfang, Northborough, MA, UNITED STATES
Zhang, Chenming, Blacksburg, VA, UNITED STATES

PATENT ASSIGNEE(S): Diosynth RTP, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020055145	A1	20020509
APPLICATION INFO.:	US 2001-998619	A1	20011130 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-903398, filed on 10 Jul 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-217069P	20000710 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 570
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to methods for purifying **Troponin I**, particularly recombinant Tropnin I produced in a bacterial expression system. Recombinant Tropnin I can be advantageously purified after reversibly **protecting** the free **sulfhydryl** groups, e.g., by forming sulfates. In a specific example, Tropnin I reacted with sodium tetrathionate yielded sulfitolyzed Tropnin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. Facile deprotection of the **sulfhydryl** groups yields a highly purified product ready for refolding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS DUPLICATE 3
ACCESSION NUMBER: 2001:515223 CAPLUS
DOCUMENT NUMBER: 135:101758
TITLE: Chromatographic **purification** of human **sulfhydryl**-protected recombinant **troponin I**
INVENTOR(S): Conn, Gregory; Reardon, Brian; Zeng, Xiangang; Zhang, Chenming
PATENT ASSIGNEE(S): Diosynth RTP, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004517	A2	20020117	WO 2001 US21817	20010710
WO 2002004517	A3	20020516		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,

ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 20020064835 A1 20020530 US 2001-903398 20010710
US 20020055145 A1 20020509 US 2001-998619 20011130
PRIORITY APPLN. INFO.: US 2000-217069P P 20000710
US 2001-903398 A1 20010710

AB The invention is directed to methods for purifying **troponin I**, particularly recombinant **troponin I** produced in a bacterial expression system. Recombinant **troponin I** can be advantageously purified after reversibly **protecting** the free **sulfhydryl** groups, e.g. by forming sulfates. In a specific example, **troponin I** reacted with sodium tetrathionate yielded sulfitolyzed **troponin I**, which was purified by chromatog. on an anion exchanger, followed by hydrophobic interaction chromatog. Facile deprotection of the **sulfhydryl** groups yields a highly purified product ready for refolding.

L12 ANSWER 4 OF 7 USPATFULL
ACCESSION NUMBER: 2002:85170 USPATFULL
TITLE: Neuropeptide-like polypeptide zpep17
INVENTOR(S): Sheppard, Paull O., Granite Falls, WA, UNITED STATES
Bishop, Paul D., Fall City, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020045210	A1	20020418
APPLICATION INFO.:	US 2001-776795	A1	20010205 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-180314P	20000204 (60)
	US 2000-180896P	20000207 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Jennifer K. Johnson, ZymoGenetics, Inc, 1201 Eastlake Avenue East, Seattle, WA, 98102
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 4459
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to polynucleotide and polypeptide molecules for zpep17, a novel secreted protein. The polynucleotides encoding zpep17, may, for example, be used to identify a region of the genome associated with human disease states. The present invention also includes methods for producing the protein, uses therefor and antibodies thereto.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 5 OF 7 USPATFULL
ACCESSION NUMBER: 2002:48270 USPATFULL
TITLE: Methods for analyzing protein binding events
INVENTOR(S): Hefti, John J., San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020028461	A1	20020307
APPLICATION INFO.:	US 2001-9,3474	A1	20010806 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-365 80, filed on 2 Aug 1999, GRANTED, Pat. No. US 6287874 Continuation-in-part of Ser. No. US 1999-246194, filed on 1 Feb 1999,		

PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)
	US 1999-134740P	19990518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Richard L. Neeley, Clifford B. Perry, Signature BioScience, Inc., 21124 Cabot Boulevard, Hayward, CA, 94545-1130
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 37 Drawing Page(s)
LINE COUNT: 4041
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielectric properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse analytical and diagnostic applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 6 OF 7 PCTFULL COPYRIGHT 2002 Univentio
ACCESSION NUMBER: 2002036624 PCTFULL ED 20020523 EW 200219
TITLE (ENGLISH): METHODS AND COMPOSITIONS RELATING TO FORTILIN, AN ANTI-APOPTOTIC MOLECULE, AND MODULATORS OF FORTILIN
TITLE (FRENCH): PROCEDES ET COMPOSITIONS ASSOCIES A LA FORTILINE, UNE MOLECULE ANTI-APOPTOTIQUE, ET MODULATEURS DE FORTILINE
INVENTOR(S): FUJISE, Kenichi; YEH, Edward
PATENT ASSIGNEE(S): BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM, for all designates States except US; FUJISE, Kenichi, for US only; YEH, Edward, for US only
AGENT: SHISHIMA, Gina, N.
LANGUAGE OF PUBL.: English
LANGUAGE OF FILING: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

	NUMBER	KIND	DATE
	WO 2002036624	A2	20020510

DESIGNATED STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
APPLICATION INFO.: WO 2001-US43485 A 20011030
PRIORITY INFO.: US 2000-60/244,416 20001030

ABEN The polypeptide Fortilin (also known as Translationally Controlled Tumour Protein, TCTP) specifically interacts with p53, a tumor suppressor involved in the induction of apoptosis and the normal growth regulation of a cell. Fortilin also specifically binds MCL1 (Myeloid Cell Leukemia 1). Fortilin has the ability to prevent apoptosis, which may be unregulated in hyperproliferative cells. The present invention is directed at compositions and methods involving a Fortilin modulator, which can induce apoptosis, for the prevention, treatment, or diagnosis of hyperproliferative diseases and conditions, including cancer and atherosclerosis. It is directed also at compositions and methods

involving Fortilin, which can inhibit apoptosis, for the treatment of diseases and condition characterized by apoptosis, including certain vascular conditions.

ABFR Le polypeptide fortiline (egalement appele proteine tumorale de regulation de traduction, TCTP) interagit specifiquement avec p53, un suppresseur de tumeur intervenant dans l'induction de l'apoptose et la regulation de la croissance normale d'une cellule. La fortiline se lie aussi specifiquement a MCL1 (leucemie myeloide 1). La fortiline est capable de prevenir l'apoptose, qui peut etre dereglee dans des cellules hyperproliferatives. L'invention concerne des compositions et des procedes comprenant un modulateur de fortiline, capable d'induire l'apoptose, pour prevenir, traiter ou diagnostiquer des maladies ou des affections hyperproliferatives, y compris le cancer et l'atherosclerose ; ainsi que des compositions et des procedes comprenant la fortiline, capable d'inhiber l'apoptose, pour traiter des maladies et affections caracterisees par l'apoptose, y compris certaines affections vasculaires.

L12 ANSWER 7 OF 7 USPATFULL
ACCESSION NUMBER: 2001:152781 USPATFULL
TITLE: Methods for analyzing protein binding events
INVENTOR(S): Hefti, John, San Francisco, CA, United States
PATENT ASSIGNEE(S): Signature BioScience, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6287874	B1	20010911
APPLICATION INFO.:	US 1999-365580		19990802 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-243194, filed on 1 Feb 1999		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)
	US 1999-134740P	19990518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Horlick, Kenneth R.
ASSISTANT EXAMINER: Strzelecka, Teresa
LEGAL REPRESENTATIVE: Ausenhus, Scott L., Perry, Clifford B., Neeley, Richard L.
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 44 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 4099
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielectric properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse analytical and diagnostic applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s troponin and purification
L13 270 FILE USPATFULL
L14 479 FILE MEDLINE
L15 5 FILE IFIPAT
L16 5 FILE USPAT2
L17 204 FILE CAPLUS

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L18          11 FILE WPIDS
L19          45 FILE EUROPATFULL
L20           4 FILE PATOSWO
L21          19 FILE PCTFULL

TOTAL FOR ALL FILES
L22        1042 TROPONIN AND PURIFICATION

=> s l22 and (sulfhydryl (w) group)
L23          35 FILE USPATFULL
L24           3 FILE MEDLINE
L25           2 FILE IFIPAT
L26           2 FILE USPAT2
L27           1 FILE CAPLUS
L28           1 FILE WPIDS
L29           1 FILE EUROPATFULL
L30           1 FILE PATOSWO
L31           1 FILE PCTFULL

TOTAL FOR ALL FILES
L32          47 L22 AND (SULFHYDRYL (W) GROUP)

=> dup rem l32
PROCESSING COMPLETED FOR L32
L33          41 DUP REM L32 (6 DUPLICATES REMOVED)

=> d l33 1-41 ibib abs

L33  ANSWER 1 OF 41  USPATFULL                          DUPLICATE 1
ACCESSION NUMBER:        2002:126323  USPATFULL
TITLE:                   Purification of human troponin I
INVENTOR(S):             Conn, Gregory, Cary, NC, UNITED STATES
                         Reardon, Brian, Seattle, WA, UNITED STATES
                         Zeng, Xianfang, Northborough, MA, UNITED STATES
                         Zhang, Chenming, Blacksburg, VA, UNITED STATES
PATENT ASSIGNEE(S):      Diosynth RTP, Inc. (U.S. corporation)

                              NUMBER         KIND    DATE
                         -- ---------- ------ --------
PATENT INFORMATION:      US 2002064835       A1   20020530
APPLICATION INFO.:       US 2001-903398      A1   20010710  (9)

                              NUMBER         DATE
                         -- ---------- --------
PRIORITY INFORMATION:    US 2000-217069P     20000710 (60)
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    DARBY & DARBY P.C., 805 Third Avenue, New York, NY,
                         10022
NUMBER OF CLAIMS:        20
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      11 Drawing Page(s)
LINE COUNT:              566
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       The invention is directed to methods for purifying Troponin I,
         particularly recombinant Tropnin I produced in a bacterial expression
         system. Recombinant Tropnin I can be advantageously purified after
         reversibly protecting the free sulfhydryl groups,
         e.g., by forming sulfates. In a specific example, Tropnin I reacted with
         sodium tetrathionate yielded sulfitolyzed Tropnin I, which was purified
         by chromatography on an anion exchanger, followed by hydrophobic
         interaction chromatography. Facile deprotection of the
         sulfhydryl groups yields a highly purified product
         ready for refolding.
```

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 2 OF 41 USPATFULL DUPLICATE 2
ACCESSION NUMBER: 2002:105940 USPATFULL
TITLE: **Purification** of human **troponin** I
INVENTOR(S): Conn, Gregory, Cary, NC, UNITED STATES
Reardon, Brian, Seattle, WA, UNITED STATES
Zeng, Xianfang, Northborough, MA, UNITED STATES
Zhang, Chenming, Blacksburg, VA, UNITED STATES
PATENT ASSIGNEE(S): Biosynth RTP, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002055145	A1	20020509
APPLICATION INFO.:	US 2001-998619	A1	20011130 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-903398, filed on 10 Jul 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-217069P	20000710 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 570
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to methods for purifying **Troponin** I, particularly recombinant Tropnin I produced in a bacterial expression system. Recombinant Tropnin I can be advantageously purified after reversibly protecting the free **sulfhydryl groups**, e.g., by forming sulfates. In a specific example, Tropnin I reacted with sodium tetrathionate yielded sulfitolyzed Tropnin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. Facile deprotection of the **sulfhydryl groups** yields a highly purified product ready for refolding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 3 OF 41 USPATFULL DUPLICATE 3
ACCESSION NUMBER: 2002:16843 USPATFULL
TITLE: RESONANT BIO-ASSAY DEVICE AND TEST SYSTEM FOR DETECTING MOLECULAR BINDING EVENTS
INVENTOR(S): HEFTI, JOHN, SAN FRANCISCO, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002009723	A1	20020124
	US 6376258	B2	20020423
APPLICATION INFO.:	US 2000-489846	A1	20000110 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-365578, filed on 2 Aug 1999, PENDING Continuation-in-part of Ser. No. US 1999-243196, filed on 1 Feb 1999, PENDING Continuation-in-part of Ser. No. US 1999-243194, filed on 1 Feb 1999, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: SIGNATURE BIOSCIENCE, INC., 21124 CABOT BLVD., HAYWARD, CA, 94545-1130
NUMBER OF CLAIMS: 64
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 38 Drawing Page(s)
LINE COUNT: 3548
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Systems and methods are presented for detecting molecular binding events and other environmental effects using the unique dielectric properties of the bound molecular structure or structures. A molecular binding region is coupled along the surface of a signal path. A test signal is propagated along the signal path, whereby the test signal couples to the molecular binding region, and in response, exhibits a signal response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 4 OF 41 USPATFULL DUPLICATE 4
ACCESSION NUMBER: 2002:122429 USPATFULL
TITLE: Computer program and database structure for detecting molecular binding events
INVENTOR(S): Hefti, John, San Francisco, CA, United States
PATENT ASSIGNEE(S): Signature BioScience, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6395480	B1	20020528
	US 2002072857	A1	20020613
APPLICATION INFO.:	US 1999-243196		19990201 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Brusca, John S.
ASSISTANT EXAMINER: Kim, Young
LEGAL REPRESENTATIVE: Perry, Clifford B.
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 51 Drawing Figure(s); 28 Drawing Page(s)
LINE COUNT: 3363
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Systems and methods for detecting molecular binding events and other environmental effects using the unique dielectric properties of the bound molecular structure or structures are presented. A molecular binding layer is coupled along the surface of a signal path. A test signal is propagated along the signal path, whereby the test signal couples to the molecular binding layer, and in response, exhibits a signal response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 5 OF 41 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 5
ACCESSION NUMBER: 2002:51573 CAPLUS
DOCUMENT NUMBER: 136:101208
TITLE: Chromatographic **purification** of human sulfhydryl-protected recombinant **troponin** I
INVENTOR(S): Conn, Gregory; Reardon, Brian; Zeng, Xiangang; Zhang, Chenming
PATENT ASSIGNEE(S): Diosynth RTP, Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002004512	A2	20020117	WO 2001-US21817	20010710
WO 2002004512	A3	20020516		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, EC, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002064835	A1	20020530	US 2001-903398	20010710
US 2002055145	A1	20020509	US 2001-998619	20011130

PRIORITY APPLN. INFO.: US 2000-217064P P 20000710
US 2001-903398 A1 20010710

AB The invention is directed to methods for purifying **troponin** I, particularly recombinant **troponin** I produced in a bacterial expression system. Recombinant **troponin** I can be advantageously purified after reversibly protecting the free **sulfhydryl groups**, e.g. by forming sulfates. In a specific example, **troponin** I reacted with sodium tetrathionate yielded sulfitolyzed **troponin** I, which was purified by chromatog. on an anion exchanger, followed by hydrophobic interaction chromatog. Facile deprotection of the **sulfhydryl groups** yields a highly purified product ready for refolding.

L33 ANSWER 6 OF 41 USPATFULL

ACCESSION NUMBER: 2002:149299 USPATFULL

TITLE: Death domain-containing receptor polynucleotides, polypeptides, and antibodies

INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077458	A1	20020620
APPLICATION INFO.:	US 2001-835788	A1	20010417 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US28666, filed on 17 Oct 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-159585P	19991018 (60)
	US 1999-167246P	19991124 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 14143

AB The present invention relates to novel human DDCR polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human DDCR polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human DDCR polypeptides.

L33 ANSWER 7 OF 41 USPATFULL

ACCESSION NUMBER: 2002:14913. USPATFULL

TITLE: .8 human secreted proteins

INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES

Rosen, Craig A., Laytonsville, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Zeng, Zhizhen, Lansdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Tewksbury, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077287	A1	20020620
APPLICATION INFO.:	US 2001-852659	A1	20010511 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, UNKNOWN
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 17779

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L33 ANSWER 8 OF 41 USPATFULL
ACCESSION NUMBER: 2002:149114 USPATFULL
TITLE: Nucleic acids, proteins, and antibodies
INVENTOR(S): Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077770	A1	20020620
APPLICATION INFO.:	US 2001-764848	A1	20010117 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-179066P	20000131 (60)
	US 2000-180678P	20000204 (60)
	US 2000-214886P	20000628 (60)
	US 2000-217487P	20000711 (60)
	US 2000-225768P	20000814 (60)
	US 2000-220963P	20000726 (60)
	US 2000-217496P	20000711 (60)
	US 2000-225447P	20000814 (60)
	US 2000-218190P	20000714 (60)
	US 2000-225717P	20000814 (60)
	US 2000-221668P	20000822 (60)
	US 2000-216637P	20000707 (60)
	US 2000-225267P	20000814 (60)
	US 2000-216880P	20000707 (60)
	US 2000-225270P	20000814 (60)

US 2000-251969P 20001208 (60)
US 2000-235834P 20000927 (60)
US 2000-234274P 20000921 (60)
US 2000-234123P 20000921 (60)
US 2000-228924P 20000830 (60)
US 2000-224518P 20000814 (60)
US 2000-236369P 20000929 (60)
US 2000-224519P 20000814 (60)
US 2000-220964P 20000726 (60)
US 2000-241809P 20001020 (60)
US 2000-249299P 20001117 (60)
US 2000-236327P 20000929 (60)
US 2000-241785P 20001020 (60)
US 2000-244617P 20001101 (60)
US 2000-225268P 20000814 (60)
US 2000-236368P 20000929 (60)
US 2000-251856P 20001208 (60)
US 2000-251868P 20001208 (60)
US 2000-229344P 20000901 (60)
US 2000-234997P 20000925 (60)
US 2000-229343P 20000901 (60)
US 2000-229345P 20000901 (60)
US 2000-229287P 20000901 (60)
US 2000-229513P 20000905 (60)
US 2000-231413P 20000908 (60)
US 2000-229509P 20000905 (60)
US 2000-236367P 20000929 (60)
US 2000-237039P 20001002 (60)
US 2000-237038P 20001002 (60)
US 2000-236370P 20000929 (60)
US 2000-236802P 20001002 (60)
US 2000-237037P 20001002 (60)
US 2000-237040P 20001002 (60)
US 2000-240960P 20001020 (60)
US 2000-239935P 20001013 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 20057

AB The present invention relates to novel proteins. More specifically, isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

L33 ANSWER 9 OF 41 USPATFULL
ACCESSION NUMBER: 2002:148014 USPATFULL
TITLE: 38 human secreted proteins
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Deng, Zhizhen, Lansdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES

Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Painted Post, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020076756	A1	20020620
APPLICATION INFO.:	US 2001-853161	A1	20010511 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-265583P	20010202 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 17788

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L33 ANSWER 10 OF 41 USPATFULL
ACCESSION NUMBER: 2002:141609 USPATFULL
TITLE: Transferrin polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020064796	A1	20020613
APPLICATION INFO.:	US 2001-891126	A1	20010626 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US34769, filed on 21 Dec 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-171595P	19991223 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 12048

AB The present invention relates to novel human transferrin polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human transferrin polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human transferrin polypeptides.

L33 ANSWER 11 OF 41 USPATFULL
ACCESSION NUMBER: 2002:133469 USPATFULL
TITLE: Serine protease polynucleotides, polypeptides, and antibodies
INVENTOR(S): Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002068320	A1	20020606
APPLICATION INFO.:	US 2001-804156	A1	20010313 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-189025P	20000314 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 13119
AB The present invention relates to novel human serine protease polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human serine protease polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human serine protease polypeptides.

L33 ANSWER 12 OF 41 USPATFULL
ACCESSION NUMBER: 2002:16703 USPATFULL
TITLE: Immunoglobulin superfamily polynucleotides, polypeptides, and antibodies
INVENTOR(S): Young, Paul E., Gaithersburg, MD, UNITED STATES
Ni, Jian, Rockville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006420	A1	20020530
APPLICATION INFO.:	US 2001-794514	A1	20010307 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US23662, filed on 29 Aug 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-152248P	19990903 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12487
AB The present invention relates to novel human Ig like polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human Ig-like polypeptides. The invention further relates to diagnostic and

therapeutic methods useful for diagnosing and treating disorders related to these novel human Ig-like polypeptides.

L33 ANSWER 13 OF 41 USPATFULL
ACCESSION NUMBER: 2002:126332 USPATFULL
TITLE: Human protein tyrosine phosphatase polynucleotides, polypeptides, and antibodies
INVENTOR(S): Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002064844	A1	20020530
APPLICATION INFO.:	US 2001-906779	A1	20010718 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2001-US1563, filed on 17 Jan 2001, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-176306P	20000118 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12139

AB The present invention relates to novel human PTPase polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human PTPase polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human PTPase polypeptides.

L33 ANSWER 14 OF 41 USPATFULL
ACCESSION NUMBER: 2002:126317 USPATFULL
TITLE: Human tumor necrosis factor delta and epsilon
INVENTOR(S): Yu, Guo-Liang, Berkeley, CA, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Dillon, Patrick J., Carlsbad, CA, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002064809	A1	20020530
APPLICATION INFO.:	US 2001-879919	A1	20010614 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-815783, filed on 12 Mar 1997, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-16812P	19960314 (60)
	US 2001-793499P	20010525 (60)
	US 2001-777478P	20010323 (60)
	US 2001-776248P	20010316 (60)
	US 2001-754875P	20001213 (60)
	US 2000-241952P	20001023 (60)
	US 2000-211537P	20000615 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 13531

AB The invention relates to human TNF delta and TNF epsilon polypeptides, polynucleotides encoding the polypeptides, methods for producing the polypeptides, in particular by expressing the polynucleotides, and agonists and antagonists of the polypeptides. The invention further relates to methods for utilizing such polynucleotides, polypeptides, agonists and antagonists for applications, which relate, in part, to research, diagnostic and clinical arts.

L33 ANSWER 15 OF 41 USPATFULL
ACCESSION NUMBER: 2002:126314 USPATFULL
TITLE: Cytokine receptor-like polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002064826	A1	20020530
APPLICATION INFO.:	US 2001-874069	A1	20010606 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US32525, filed on 30 Nov 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-168621P	19991203 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12089

AB The present invention relates to novel human cytokine receptor-like polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human cytokine receptor-like polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human cytokine receptor-like polypeptides.

L33 ANSWER 16 OF 41 USPATFULL
ACCESSION NUMBER: 2002:120306 USPATFULL
TITLE: 95 human secreted proteins
INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Baker, Kevin P., Darnestown, MD, UNITED STATES
Birse, Charles E., North Potomac, MD, UNITED STATES
Fischella, Michele, Bethesda, MD, UNITED STATES
Komatsoulis, George A., Silver Spring, MD, UNITED STATES
Olsen, Craig A., Laytonsville, MD, UNITED STATES
Rappet, Daniel E., Centreville, VA, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Duan, D. Roxanne, Bethesda, MD, UNITED STATES
Olsen, Henrik S., Gaithersburg, MD, UNITED STATES

LaFleur, David W., Washington, DC, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Wei, Ping, Brookeville, MD, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020064818	A1	20020530
APPLICATION INFO.:	US 2001-789561	A1	20010222 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US24008, filed on 31 Aug 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-152317P	19990903 (60)
	US 1999-152315P	19990903 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 24623
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 17 OF 41 USPATFULL
ACCESSION NUMBER: 2002:119538 USPATFULL
TITLE: Nucleic acids, proteins, and antibodies
INVENTOR(S): Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020061521	A1	20020523
APPLICATION INFO.:	US 2001-764869	A1	20010117 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-179065P	20000131 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 7797
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel cardiovascular system related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "cardiovascular system antigens," and the use of such cardiovascular system antigens for detecting disorders of the cardiovascular system, particularly the presence of cancer of cardiovascular system tissues and cancer metastases. More specifically, isolated cardiovascular system associated nucleic acid molecules are

provided encoding novel cardiovascular system associated polypeptides. Novel cardiovascular system polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human cardiovascular system associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the cardiovascular system, including cancer of cardiovascular system tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 18 OF 41 USPATFULL
ACCESSION NUMBER: 2002:105937 USPATFULL
TITLE: Major intrinsic protein (MIP) like polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ruben, Steven A., Olney, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002055142	A1	20020509
APPLICATION INFO.:	US 2001-862419	A1	20010523 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US31919, filed on 21 Nov 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-167247P	19991124 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1
LINE COUNT: 11747
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human MIP-like polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human MIP-like polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human MIP-like polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 19 OF 41 USPATFULL
ACCESSION NUMBER: 2002:94088 USPATFULL
TITLE: Fringle domain-containing polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002051984	A1	20020502

APPLICATION INFO.: US 2001-848288 A1 20010504 (9)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US30664, filed on 8 Nov 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-164853P	19991112 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12041
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human KDC polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human KDC polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human KDC polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 20 OF 41 USPATFULL
ACCESSION NUMBER: 2002:85190 USPATFULL
TITLE: Nucleic acids, proteins, and antibodies
INVENTOR(S): Rosen, Craig A., Laytonsville, MD, UNITED STATES
Rubin, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002045730	A1	20020418
APPLICATION INFO.:	US 2001-908711	A1	20010720 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2001-US1360, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764867, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1344, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764892, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1348, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764988, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1339, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764905, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764891, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1339, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764804, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1340, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764874, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1344, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764845, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1329, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764842, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764902, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1249, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser.

No. US 2001-764870, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1348, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764882, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1347, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764896, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1307, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764864, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1341, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764856, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1336, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. US 2001-764868, filed on 17 Jan 2001, UNKNOWN Continuation-in-part of Ser. No. WO 2001-US1312, filed on 17 Jan 2001, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-179066P	20000131	(60)
	US 2000-180628P	20000204	(60)
	US 2000-251868P	20001208	(60)
	US 2000-232398P	20000914	(60)
	US 2000-249300P	20001117	(60)
	US 2000-251990P	20001208	(60)
	US 2000-250160P	20001201	(60)
	US 2000-209467P	20000607	(60)
	US 2000-179066P	20000131	(60)
	US 2000-180628P	20000204	(60)
	US 2000-214886P	20000628	(60)
	US 2000-217487P	20000711	(60)
	US 2000-225758P	20000814	(60)
	US 2000-220963P	20000726	(60)
	US 2000-217496P	20000711	(60)
	US 2000-225447P	20000814	(60)
	US 2000-218290P	20000714	(60)
	US 2000-225757P	20000814	(60)
	US 2000-226868P	20000822	(60)
	US 2000-216647P	20000707	(60)
	US 2000-225267P	20000814	(60)
	US 2000-216880P	20000707	(60)
	US 2000-225770P	20000814	(60)
	US 2000-251866P	20001208	(60)
	US 2000-239924P	20000927	(60)
	US 2000-234274P	20000921	(60)
	US 2000-234223P	20000921	(60)
	US 2000-228224P	20000830	(60)
	US 2000-224518P	20000814	(60)
	US 2000-238294P	20000929	(60)
	US 2000-224514P	20000814	(60)
	US 2000-220964P	20000726	(60)
	US 2000-241204P	20001010	(60)
	US 2000-249794P	20001117	(60)
	US 2000-238427P	20000929	(60)
	US 2000-241785P	20001010	(60)
	US 2000-244017P	20001101	(60)
	US 2000-225268P	20000814	(60)
	US 2000-238368P	20000929	(60)
	US 2000-251856P	20001208	(60)
	US 2000-251868P	20001208	(60)
	US 2000-229444P	20000901	(60)
	US 2000-244347P	20000925	(60)
	US 2000-229343P	20000901	(60)

	US 2000-249300P	20001117 (60)
	US 2000-249265P	20001117 (60)
	US 2000-246610P	20001108 (60)
	US 2000-246621P	20001108 (60)
	US 2000-230437P	20000906 (60)
	US 2000-251999P	20001208 (60)
	US 2000-251988P	20001205 (60)
	US 2000-251930P	20001205 (60)
	US 2000-251479P	20001206 (60)
	US 2000-256719P	20001205 (60)
	US 2000-250150P	20001201 (60)
	US 2000-251489P	20001208 (60)
	US 2000-250391P	20001201 (60)
	US 2000-254097P	20001211 (60)
	US 2000-231968P	20000917 (60)
	US 2000-226279P	20000818 (60)
	US 2000-186350P	20000302 (60)
	US 2000-184664P	20000224 (60)
	US 2000-189874P	20000316 (60)
	US 2000-198123P	20000418 (60)
	US 2000-227009P	20000823 (60)
	US 2000-235484P	20000926 (60)
	US 2000-190076P	20000317 (60)
	US 2000-209467P	20000607 (60)
	US 2000-205515P	20000519 (60)
	US 2001-259678P	20010105 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 24462
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel ovarian related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "ovarian antigens," and the use of such ovarian antigens for detecting disorders of the ovaries and/or breast, particularly the presence of ovarian and/or breast cancer and ovarian and/or breast cancer metastases. More specifically, isolated ovarian associated nucleic acid molecules are provided encoding novel ovarian associated polypeptides. Novel ovarian polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human ovarian associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the ovaries and/or breast, including ovarian and/or breast cancer, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 21 OF 41 USPATFULL
ACCESSION NUMBER: 2002:85170 USPATFULL
TITLE: Neuropeptide like polypeptide zpep17
INVENTOR(S): Sheppard, Paull O., Granite Falls, WA, UNITED STATES
Bishop, Paul D., Fall City, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002045210	A1	20020418

APPLICATION INFO.: US 2001-776795 A1 20010205 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-180314P	20000204 (60)
	US 2000-180896P	20000207 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Jennifer K. Johnson, ZymoGenetics, Inc, 1201 Eastlake Avenue East, Seattle, WA, 98102
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 4459
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to polynucleotide and polypeptide molecules for zpep17, a novel secreted protein. The polynucleotides encoding zpep17, may, for example, be used to identify a region of the genome associated with human disease states. The present invention also includes methods for producing the protein, uses therefor and antibodies thereto.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 22 OF 41 USPATFULL
ACCESSION NUMBER: 2002:78729 USPATFULL
TITLE: Nucleic acids, proteins, and antibodies
INVENTOR(S): Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002042386	A1	20020411
APPLICATION INFO.:	US 2001-764870	A1	20010117 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-179065P	20000131 (60)
	US 2000-180628P	20000204 (60)
	US 2000-214886P	20000628 (60)
	US 2000-217487P	20000711 (60)
	US 2000-223758P	20000814 (60)
	US 2000-220963P	20000726 (60)
	US 2000-217496P	20000711 (60)
	US 2000-225447P	20000814 (60)
	US 2000-218290P	20000714 (60)
	US 2000-225757P	20000814 (60)
	US 2000-226868P	20000822 (60)
	US 2000-216647P	20000707 (60)
	US 2000-225267P	20000814 (60)
	US 2000-216980P	20000707 (60)
	US 2000-225770P	20000814 (60)
	US 2000-251869P	20001208 (60)
	US 2000-235844P	20000927 (60)
	US 2000-244774P	20001004 (60)
	US 2000-244123P	20001002 (60)
	US 2000-227824P	20000830 (60)
	US 2000-224718P	20000814 (60)
	US 2000-226694P	20000904 (60)
	US 2000-224519P	20000814 (60)
	US 2000-210964P	20000720 (60)
	US 2000-218094P	20000810 (60)
	US 2000-249249P	20001117 (60)
	US 2000-246327P	20000929 (60)

US 2000-241785P 20001023 (60)
US 2000-244617P 20001101 (60)
US 2000-225264P 20000814 (60)
US 2000-236368P 20000929 (60)
US 2000-251856P 20001208 (60)
US 2000-251868P 20001208 (60)
US 2000-229344P 20000901 (60)
US 2000-234997P 20000925 (60)
US 2000-229343P 20000901 (60)
US 2000-229345P 20000901 (60)
US 2000-229287P 20000901 (60)
US 2000-229513P 20000906 (60)
US 2000-231413P 20000908 (60)
US 2000-229509P 20000905 (60)
US 2000-236367P 20000929 (60)
US 2000-237039P 20001002 (60)
US 2000-237038P 20001002 (60)
US 2000-236370P 20000929 (60)
US 2000-236803P 20001002 (60)
US 2000-237037P 20001002 (60)
US 2000-237040P 20001002 (60)
US 2000-240960P 20001020 (60)
US 2000-239935P 20001013 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 23133
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel proteins. More specifically, isolated nucleic acid molecules are provided encoding novel polypeptides. Novel polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human polynucleotides and/or polypeptides, and antibodies. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to these novel polypeptides. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting or enhancing the production and function of the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 23 OF 41 USPATFULL
ACCESSION NUMBER: 2002:78715 USPATFULL
TITLE: Stanniocalcin polynucleotides, polypeptides, and methods based thereon
INVENTOR(S): Olsen, Henrik S., Gaithersburg, MD, UNITED STATES
Zhang, Ke-Zhou, Brussels, BELGIUM
Lindsberg, Perttu, Helsinki, FINLAND
Tatlisumak, Turgut, Helsinki, FINLAND
Kaste, Markku, Vantaa, FINLAND
Andersson, Leif C., Helsinki, FINLAND
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002042372	A1	20020411
APPLICATION INFO.:	US 2001-840939	A1	20010425 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US29432, filed		

on 26 Oct 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-161740P	19991027 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 47
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Page(s)
LINE COUNT: 9559
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to human stanniocalcin (STC) polynucleotides, polypeptides, and other Stanniocalcin compositions and to novel methods based thereon. In a specific embodiment, the Stanniocalcin compositions of the invention are used to treat or protect neural cells. Moreover, the present invention relates to vectors, host cells, antibodies, and recombinant and synthetic methods for producing the Stanniocalcin compositions of the invention. Also provided are diagnostic methods for detecting or prognosing diseases, disorders, damage or injury, associated with alterations of the Stanniocalcin compositions of the invention, and to therapeutic methods for treating such diseases, disorders, damage or injury.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 24 OF 41 USPATFULL
ACCESSION NUMBER: 2002:78412 USPATFULL
TITLE: Nucleic acids, proteins, and antibodies
INVENTOR(S): Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20020042096	A1	20020411	
APPLICATION INFO.:	US 2001-764887	A1	20010117	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-179065P	20000131 (60)
	US 2000-180678P	20000204 (60)
	US 2000-214886P	20000628 (60)
	US 2000-217487P	20000711 (60)
	US 2000-225758P	20000814 (60)
	US 2000-220963P	20000726 (60)
	US 2000-217496P	20000711 (60)
	US 2000-225447P	20000814 (60)
	US 2000-218230P	20000714 (60)
	US 2000-225757P	20000814 (60)
	US 2000-226868P	20000822 (60)
	US 2000-216647P	20000707 (60)
	US 2000-225367P	20000814 (60)
	US 2000-216880P	20000707 (60)
	US 2000-225270P	20000814 (60)
	US 2000-251869P	20001208 (60)
	US 2000-235434P	20000927 (60)
	US 2000-341774P	20000921 (60)
	US 2000-342233P	20000921 (60)
	US 2000-228424P	20000830 (60)
	US 2000-224519P	20000814 (60)
	US 2000-236479P	20000929 (60)
	US 2000-224519P	20000814 (60)

US 2000-220964P 20000726 (60)
US 2000-241809P 20001020 (60)
US 2000-249244P 20001117 (60)
US 2000-236477P 20000929 (60)
US 2000-241785P 20001020 (60)
US 2000-244617P 20001101 (60)
US 2000-225268P 20000814 (60)
US 2000-236368P 20000929 (60)
US 2000-251856P 20001208 (60)
US 2000-251868P 20001208 (60)
US 2000-229344P 20000901 (60)
US 2000-234997P 20000925 (60)
US 2000-229343P 20000901 (60)
US 2000-229345P 20000901 (60)
US 2000-229287P 20000901 (60)
US 2000-229613P 20000905 (60)
US 2000-231413P 20000908 (60)
US 2000-229509P 20000905 (60)
US 2000-236367P 20000929 (60)
US 2000-237039P 20001002 (60)
US 2000-237038P 20001002 (60)
US 2000-236370P 20000929 (60)
US 2000-236802P 20001002 (60)
US 2000-237037P 20001002 (60)
US 2000-237040P 20001002 (60)
US 2000-240960P 20001020 (60)
US 2000-239935P 20001013 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 19583
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel liver related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "liver antigens," and the use of such liver antigens for detecting disorders of the liver, particularly the presence of cancer of liver and cancer metastases. More specifically, isolated liver associated nucleic acid molecules are provided encoding novel liver associated polypeptides. Novel liver polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human liver associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the liver, including cancer of liver tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 25 OF 41 USPATFULL
ACCESSION NUMBER: 2002:66844 USPATFULL
TITLE: ABC transport polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION:	US 20020037549	A1	20020328
APPLICATION INFO.:	US 2001-767870	A1	20010124 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US19736, filed on 20 Jul 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-145115P	19990723 (60)
	US 1999-149445P	19990818 (60)
	US 1999-164730P	19991112 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12219
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human ABC transport polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human ABC transport polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human ABC transport polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 26 OF 41 USPATFULL
ACCESSION NUMBER: 2002:66870 USPATFULL
TITLE: IL-6-like polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Shi, Tanggu, Gaithersburg, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020037573	A1	20020328
APPLICATION INFO.:	US 2001-875016	A1	20010607 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US33134, filed on 7 Dec 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169838P	19991209 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 11587
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human IL-6-like polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human IL 6-like polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human IL-6 like polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 27 OF 41 USPATFULL
ACCESSION NUMBER: 2002:48270 USPATFULL

TITLE: Methods for analyzing protein binding events
INVENTOR(S): Hefti, John J., San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020028461	A1	20020307
APPLICATION INFO.:	US 2001-923474	A1	20010806 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-365580, filed on 2 Aug 1999, GRANTED, Pat. No. US 6287874 Continuation-in-part of Ser. No. US 1999-243194, filed on 1 Feb 1999, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)
	US 1999-134740P	19990518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Richard L. Neeley, Clifford B. Perry, Signature BioScience, Inc., 21124 Cabot Boulevard, Hayward, CA, 94545-1130
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 37 Drawing Page(s)
LINE COUNT: 4041
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielectric properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse analytical and diagnostic applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 28 OF 41 USPATFULL
ACCESSION NUMBER: 2002:22131 USPATFULL
TITLE: 18 Human secreted proteins
INVENTOR(S): Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES
Kapper, Daniel E., Centreville, VA, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002017906	A1	20020214
APPLICATION INFO.:	US 2001-764826	A1	20010115 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US22350, filed on 15 Aug 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-148759P	19990816 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 18177
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and

isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 29 OF 41 USPATFULL
ACCESSION NUMBER: 2002:12261 USPATFULL
TITLE: Uteroglobin-like polynucleotides, polypeptides, and antibodies
INVENTOR(S): Ni, Jian, Germantown, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006640	A1	20020117
APPLICATION INFO.:	US 2001 846258	A1	20010502 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US30326, filed on 3 Nov 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-163395P	19991104 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 12076
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human uteroglobin-like polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human uteroglobin-like polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human uteroglobin-like polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 30 OF 41 USPATFULL
ACCESSION NUMBER: 2002:9489 USPATFULL
TITLE: Retinoid receptor interacting polynucleotides, polypeptides, and antibodies
INVENTOR(S): Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002004489	A1	20020110
APPLICATION INFO.:	US 2001-788660	A1	20010221 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000 US22351, filed on 15 Aug 2000, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-143717P	19990716 (60)
	US 2000-184026P	20000314 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE,

ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 37
EXEMPLARY CLAIM: 1
LINE COUNT: 1297
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human RIP polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human RIP polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human RIP polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 31 OF 41 USPATFULL
ACCESSION NUMBER: 2002:75196 USPATFULL
TITLE: Bio assay device and test system for detecting molecular binding events
INVENTOR(S): Hefti, John, San Francisco, CA, United States
PATENT ASSIGNEE(S): Signature BioScience, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6368795	B1	20020409
APPLICATION INFO.:	US 1999-243194		19990201 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Chin, Christopher L.
LEGAL REPRESENTATIVE: Neeley, Richard L., Perry, Clifford B.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 51 Drawing Figure(s); 28 Drawing Page(s)
LINE COUNT: 3053
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Systems and methods for detecting molecular binding events and other environmental effects using the unique dielectric properties of the bound molecular structure or structures are presented. A molecular binding layer is coupled along the surface of a signal path. A test signal is propagated along the signal path, whereby the test signal couples to the molecular binding layer, and in response, exhibits a signal response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 32 OF 41 USPATFULL
ACCESSION NUMBER: 2002:9760 USPATFULL
TITLE: Method and apparatus for detecting molecular binding events
INVENTOR(S): Hefti, John, San Francisco, CA, United States
PATENT ASSIGNEE(S): Signature BioScience, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6338966	B1	20020115
APPLICATION INFO.:	US 1999-365578		19990802 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1999-243194, filed on 1 Feb 1999		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Chin, Christopher L.	
LEGAL REPRESENTATIVE:	Perry, Clifford B., Neeley, Richard L.	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	51 Drawing Figure(s); 28 Drawing Page(s)	
LINE COUNT:	3281	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Systems and methods are presented for detecting molecular binding events and other environmental effects using the unique dielectric properties of the bound molecular structure or structures. A molecular binding region is coupled along the surface of a signal path. A test signal is propagated along the signal path, whereby the test signal couples to the molecular binding region, and in response, exhibits a signal response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 33 OF 41 EUROPATFULL COPYRIGHT 2003 WILA

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

ACCESSION NUMBER:	786087 EUROPATFULL EW 200209 FS PS
TITLE:	POLYPEPTIDE-DENDRIMER COMPLEXES. POLYPEPTID-DENDRIMER KOMPLEXE. COMPLEXES DE POLYPEPTIDES-DENDRIMERES.
INVENTOR(S):	SINGH, Pratap, 19111 S.W. 69th Street, Miami, FL 33193, US
PATENT ASSIGNEE(S):	DADE BEHRING INC., 1717 Deerfield Road, Deerfield, Illinois 60015, US
PATENT ASSIGNEE NO:	1905941
AGENT:	Helbing, Joerg, Dr. Dipl.-Chem. et al., Patentanwaelte von Kreisler-Selting-Werner, Postfach 10 22 41, 50462 Koeln, DE
AGENT NUMBER:	80653
OTHER SOURCE:	BEPB2002019 EP 0786087 B1 0209
SOURCE:	Wila EPS-2002-H09-T2
DOCUMENT TYPE:	Patent
LANGUAGE:	Anmeldung in Englisch; Veroeffentlichung in Englisch
DESIGNATED STATES:	R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE
PATENT INFO.PUB.TYPE:	EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale Anmeldung)

PATENT INFORMATION:

	PATENT NO	KIND	DATE
	EP 786087	B1	20020227
'OFFENLEGUNGS' DATE:			19970730
APPLICATION INFO.:	EP 1996-927393		19960809
PRIORITY APPLN. INFO.:	US 1995-514075		19950811
RELATED DOC. INFO.:	WO 96-US13057		960809 INTAKZ
	WO 9707398		970227 INTPNR
REFERENCE PAT. INFO.:	WO 89-01176 A		WO 94-19693 A
	WO 91-07902 A		WO 94-28641 A

REF. NON-PATENT-LIT.: BIOCONJUGATE CHEMISTRY, vol. 1, no. 5, 1 September 1990, pages 305-308, XP000174604 ROBERTS J C ET AL: "USING STARBURST DENDRIMERS AS LINKER MOLECULES TO RADIOLABEL ANTIBODIES" ABSTRACTS OF PAPERS AMERICAN CHEMICAL SOCIETY, vol. 211, no. 1-2, 7 - 28 March 1996, NEW ORLEANS, page BIOT 193 XP002120332 P. SINGH: "Coupling of multiple proteins to starburst dendrimers."

L33 ANSWER 34 OF 41 PCTFULL COPYRIGHT 2002 Univentio
ACCESSION NUMBER: 2002036624 PCTFULL ED 20020523 EW 200219
TITLE (ENGLISH): METHODS AND COMPOSITIONS RELATING TO FORTILIN, AN ANTI APOPTOTIC MOLECULE, AND MODULATORS OF FORTILIN
TITLE (FRENCH): PROCEDES ET COMPOSITIONS ASSOCIES A LA FORTILINE, UNE MOLECULE ANTI-APOPTOTIQUE, ET MODULATEURS DE FORTILINE
INVENTOR(S): FUJISE, Kenichi; YEH, Edward
PATENT ASSIGNEE(S): BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM, for all designates States except US; FUJISE, Kenichi, for US only; YEH, Edward, for US only
AGENT: SHISHIMA, Gina, N.
LANGUAGE OF PUBL.: English
LANGUAGE OF FILING: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

	NUMBER	KIND	DATE
	WO 2002036624	A2	20020510

DESIGNATED STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
APPLICATION INFO.: WO 2001-US42985 A 20011030
PRIORITY INFO.: US 2000 60/244,416 20001030
ABEN The polypeptide Fortilin (also known as Translationally Controlled Tumour Protein, TCTP) specifically interacts with p53, a tumor suppressor involved in the induction of apoptosis and the normal growth regulation of a cell. Fortilin also specifically binds MCL1 (Myeloid Cell Leukemia 1). Fortilin has the ability to prevent apoptosis, which may be unregulated in hyperproliferative cells. The present invention is directed at compositions and methods involving a Fortilin modulator, which can induce apoptosis, for the prevention, treatment, or diagnosis of hyperproliferative diseases and conditions, including cancer and atherosclerosis. It is directed also at compositions and methods involving Fortilin, which can inhibit apoptosis, for the treatment of diseases and condition characterized by apoptosis, including certain vascular conditions.
ABFR Le polypeptide fortiline (egalement appele proteine tumorale de regulation de traduction, TCTP) interagit specifiquement avec p53, un suppresseur de tumeur intervenant dans l'induction de l'apoptose et la regulation de la croissance normale d'une cellule. La fortiline se lie aussi specifiquement a MCL1 (leucemie myelcide 1). La fortiline est capable de prevenir l'apoptose, qui peut etre dereglee dans des cellules hyperproliferatives. L'invention concerne des compositions et des procedes comprenant un modulateur de fortiline, capable d'induire l'apoptose, pour prevenir, traiter ou diagnostiquer des maladies ou des affections hyperproliferatives, y compris le cancer et l'atherosclerose ; ainsi que des compositions et des procedes comprenant la fortiline, capable d'inhiber l'apoptose, pour traiter des maladies et affections caracterisees par l'apoptose, y compris certaines affections vasculaires.

L33 ANSWER 35 OF 41 USPATFULL
ACCESSION NUMBER: 2001:176781 USPATFULL
TITLE: Methods for analyzing protein binding events
INVENTOR(S): Hefti, John, San Francisco, CA, United States
PATENT ASSIGNEE(S): Signature BioScience, Inc., Hayward, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE

PATENT INFORMATION: US 6287874 B1 20010911
APPLICATION INFO.: US 1999-365580 19990802 (9)
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-243194, filed on 1 Feb 1999

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-73445P	19980202 (60)
	US 1999-134740P	19990518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Horlick, Kenneth R.
ASSISTANT EXAMINER: Strzelecka, Teresa
LEGAL REPRESENTATIVE: Ausenhus, Scott L., Perry, Clifford B., Neeley, Richard L.
NUMBER OF CLAIMS: 45
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 44 Drawing Figure(s); 33 Drawing Page(s)
LINE COUNT: 4099
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a variety of methods of analyzing protein binding events using a system capable of directly detecting protein/ligand complexes based upon the dielectric properties of the complex. The system can be used in a variety of analyses involving protein binding events, such as screening ligand libraries, characterizing protein binding interactions, and identifying ligands. The system can also be utilized in diverse analytical and diagnostic applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 36 OF 41 USPATFULL
ACCESSION NUMBER: 2000:87731 USPATFULL
TITLE: Methods and compositions for using membrane-penetrating proteins to carry materials across cell membranes
INVENTOR(S): Draper, Rockford, Plano, TX, United States
PATENT ASSIGNEE(S): Board of Regents, The University of Texas Systems, Austin, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6086900		20000711
APPLICATION INFO.:	US 1998-47148		19980324 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-42056P	19970326 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Guzo, David
LEGAL REPRESENTATIVE: Arnold, White & Durkee
NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 2729
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods and compositions delivery of agents into the cytoplasm of cells. Particularly, it concerns the use of membrane penetrating toxin proteins to deliver drugs to the cytoplasm of target cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 37 OF 41 USPATFULL
ACCESSION NUMBER: 2000:84049 USPATFULL

TITLE: Polypeptide: dendrimer complexes
INVENTOR(S): Singh, Pratap, Wilmington, DE, United States
Lin, Spencer, Granger, IN, United States
Moll, III, Fred, Pembroke Pines, FL, United States
PATENT ASSIGNEE(S): Dade Behring Inc., Deerfield, IL, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6083708		20000704
APPLICATION INFO.:	US 1995-514075		19950811 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Wortman, Donna C.
LEGAL REPRESENTATIVE: Lundquist, Ronald C, Tymeson, Cynthia G
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1674
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions are disclosed, comprising dendrimers to which a first polypeptide is controllably coupled. Such polypeptide-dendrimer compositions are effective for controllably coupling a second polypeptide to the dendrimer. The first and second polypeptides have separate and distinct defined biological activities, for example, two antibodies with first and second binding specificities or an antibody and an enzymatic label. Such compositions are useful as indicators in specific binding assays, e.g., immunoassays. Methods for sequentially coupling two different polypeptides to a dendrimer to form compositions of the invention also are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 38 OF 41 MEDLINE
ACCESSION NUMBER: 90062164 MEDLINE
DOCUMENT NUMBER: 90062164 PubMed ID: 2584219
TITLE: The reactivity of **sulfhydryl groups** of bovine cardiac **troponin** C.
AUTHOR: Fuchs F; Liou Y M; Grabarek Z
CORPORATE SOURCE: Department of Physiology, University of Pittsburgh School of Medicine, Pennsylvania 15261.
CONTRACT NUMBER: AR-10551 (NIAMS)
R-37-HL 05949 (NHLBI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1989 Dec 5) 264 (34) 20344-9.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199001
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19900108

AB Bovine cardiac **troponin** C (cTnC) contains 2 cysteine residues, Cys-35 located in the nonfunctional Ca2+-binding loop I and Cys-84 in the N-terminal segment of the central helix. We have studied the reactivity of Cys residues in cTnC with 5,5'-dithiobis(2-nitrobenzoic acid) (DTNB) and 7-diethylamino-4-(4'-maleimidylphenyl)-4-methylcoumarin (CPM). The latter compound fluoresces only when reacted with the protein. The reaction with DTNB followed second order kinetics with respect to DTNB, the rate constants being 3.37 s-1 M-1 and 1.82 s-1 M-1 in the presence and absence of Ca2+, respectively. These rates are much slower than the rate of reaction with Cys-98 of skeletal TnC (sTnC) or with the urea-denatured cTnC, indicating that both Cys residues are partly buried within the

structure of the protein. The increase in reactivity was induced by binding of Ca2+ to the single low affinity Ca2+ binding site (site II). The fluorescence increase upon reaction of cTnC with CPM in the absence of Ca2+ could be fitted with a single exponential equation indicating that both cysteine residues are equally available to the reagent. The reaction in the presence of Ca2+ was biphasic. Analysis of CNBr fragments of cTnC labeled with CPM under various conditions indicated that in the presence of Ca2+ the reactivity of Cys-84 is increased while that of Cys-35 is slightly decreased. This finding is consistent with the model of Herzberg et al. (Herzberg, O., Moult, J., and James, M. N. G. (1986) J. Biol. Chem. 261, 2638-2644) and the data of Ingraham and Hodges (Ingraham, R. H., and Hodges, R. S. (1988) Biochemistry 27, 5891-5898), suggesting that the Ca2+-induced conformational change in the N-terminal half of TnC involves separation of the helix C from the central helix, thereby increasing the accessibility of Cys-84. The slow overall kinetics, however, indicates that the structure in the vicinity of Cys residues is relatively compact regardless of Ca2+. We interpret the increase in reactivity towards CPM as consistent with a Ca2+-induced exposure of a hydrophobic pocket in the vicinity of Cys-84.

L33 ANSWER 39 OF 41 USPATFULL
ACCESSION NUMBER: 86:34211 USPATFULL
TITLE: Protein kinase enzyme AUT-PK 500 and a radioimmunoassay for detection of neoplasia
INVENTOR(S): Sharma, Rameshwar K., Memphis, TN, United States
PATENT ASSIGNEE(S): The University of Tennessee Research Corp., Knoxville, TN, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4594319		19860610	
APPLICATION INFO.:	US 1984-590712		19840319	(6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Wiseman, Thomas G.
ASSISTANT EXAMINER: Moskowitz, M.
LEGAL REPRESENTATIVE: Neuner, George W., Linek, Ernest V.
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1,6
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1019
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention is directed to AUT-PK 500, a novel autophosphorylating protein kinase, to the **purification** and characterization of AUT-PK 500 from rat adrenocortical carcinoma, to the use of AUT-PK 500 as a marker for neoplasia cells, and to a radioimmunoassay for detecting AUT PK 500 in neoplasia cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 40 OF 41 MEDLINE
ACCESSION NUMBER: 83135739 MEDLINE
DOCUMENT NUMBER: 83135739 PubMed ID: 6826548
TITLE: Hydrodynamic properties of bovine cardiac **troponin** -I and **troponin**-T.
AUTHOR: Byers D M; Kay C M
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1983 Mar 10) 258 (5) 2951-4.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198304
ENTRY DATE: Entered STN: 19900318

Last Updated on STN: 19990129
Entered Medline: 19830407

AB Bovine cardiac **troponin**-I (TN-I) and **troponin**-T (TN-T) have been examined in solution using ultracentrifugation, gel filtration, and viscosity. A new method of purifying TN-T, employing hydroxylapatite chromatography in 6 M urea, is reported. Cardiac TN-T (Mr = 36,000) undergoes a reversible, concentration-dependent association in nondenaturing buffers, probably to a tetramer. The Stokes radius (Rs) of aggregated TN-T, determined by sedimentation velocity and gel chromatography on Sephacryl S-300, is 80 A and the reduced viscosity of the subunit ranges from 20 to 25 ml/g at protein concentrations between 0.5 and 2.5 mg/ml. These data suggest that TN-T forms highly asymmetric aggregates in solution. Bovine cardiac TN-I also has a tendency toward self-association, but is essentially monomeric (Mr = 23,000) at protein concentrations below 1 mg/ml. The presence of reducing agent is necessary to avoid intermolecular disulfide bond formation. From gel filtration experiments, the value of Rs is 29 A indicating that TN-I is a **moderately asymmetric protein** (frictional ratio = 1.5). Similar properties are observed when both **sulfhydryl groups** of TN-I are modified by **carboxamidomethylation**.

L33 ANSWER 41 OF 41 MEDLINE
ACCESSION NUMBER: 71011997 MEDLINE
DOCUMENT NUMBER: 71011997 PubMed ID: 4248628
TITLE: A study of the role of **sulfhydryl groups** in the interaction of **troponin** and myofibrils.
AUTHOR: Parker C J Jr; Kilbert L H Jr
SOURCE: ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1970 Oct) 140 (2) 326-33.
Journal code: 0372430. ISSN: 0003-9861.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197012
ENTRY DATE: Entered STN: 19900101
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                      frequency
 NEWS  5  Feb 19      Access via Tymnet and SprintNet Eliminated Effective [illegible]
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L3            0 FILE SCISEARCH
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L5            0 FILE EMBASE
L6            1 FILE CAPLUS
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L12           [illegible] FILE LIFESCI
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L14           2 FILE USPATFULL
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L67 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:51523 CAPLUS
DOCUMENT NUMBER: [illegible]
TITLE: Chromatographic purification of human sulfhydryl-protected [illegible] troponin I
INVENTOR(S): [illegible] Chenming
PATENT ASSIGNEE(S): Diosynth RTP, Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: [illegible]
LANGUAGE: [illegible]

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002004512	A2	20020117	WO 2001-US21817	20010710
WO 2002004512	A3	20020516		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 20020064837	A1	20020530	US 2001-905398	20010710
US 2002095147	A1	20020718	US 2001-999619	20011130

PRIORITY APPLN. INFO.: US 2000-217069P P 20000710
US 2001-905398 A1 20010710

AB The invention is directed to methods for purifying **troponin I**, particularly recombinant **troponin I** produced in a bacterial expression system. Recombinant **troponin I** can be advantageously purified after reversibly protecting the free sulfhydryl groups, e.g. by forming sulfates. In a specific example, **troponin I** reacted with sodium tetrathionate yielded sulfitolyzed **troponin I**, which was purified by chromatog. on an anion exchanger, followed by hydrophobic interaction chromatog. Facile deprotection of the sulfhydryl groups yields a highly purified product ready for refolding.

L67 ANSWER 2 OF 6 USPATFULL
ACCESSION NUMBER: 2002:126223 USPATFULL
TITLE: **Purification** of human **troponin I**
INVENTOR(S): Chen, Jeffery, Cary, NC, UNITED STATES
Reardon, Brian, Seattle, WA, UNITED STATES
Meng, Xiantang, Northborough, MA, UNITED STATES
Zhang, Chenming, Blacksburg, VA, UNITED STATES
PATENT ASSIGNEE(S): Biosynth RTP, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020064837	A1	20020530
APPLICATION INFO.:	US 2001-905398	A1	20010710 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-217069P	20000710 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: 566
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to methods for purifying **Troponin I**, particularly recombinant Troponin I produced in a bacterial expression system. For example, Troponin I can be advantageously purified after reversibly protecting the free sulfhydryl groups, e.g., by forming sulfates. In a specific example, Troponin I reacted with sodium tetrathionate yielded sulfitolyzed Troponin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. Facile deprotection of the sulfhydryl groups yields a highly purified product ready for refolding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L67 ANSWER 3 OF 6 USPATFULL
ACCESSION NUMBER: [illegible] USPATFULL
TITLE: **Purification** [illegible] **troponin I**
INVENTOR(S): Conn, Gregory, Cary, NC, UNITED STATES
Reardon, Brian, Seattle, WA, UNITED STATES
Zeng, Xianfang, Northborough, MA, UNITED STATES
Zhang, Chenming, Blacksburg, VA, UNITED STATES
PATENT ASSIGNEE(S): Diosynth RTP, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 20020058145	A1	20020509
APPLICATION INFO.:	US 2001-998619	A1	20011130 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2001-903398, filed on 10 Jul 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	[illegible]	[illegible]

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Page(s)
LINE COUNT: [illegible]
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to methods for purifying **Troponin I**, particularly recombinant Tropnin I produced in a bacterial expression system. Recombinant Tropnin I can be advantageously purified after reversibly protecting the free sulfhydryl groups, e.g., by forming sulfates. In a specific example, Tropnin I reacted with sodium tetrathionate yielded sulfitolyzed Tropnin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. [illegible] yields a highly purified product ready for refolding.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L67 ANSWER 4 OF 6 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: [illegible] WPIDS
DOC. NO. CPI: [illegible]
TITLE: Purifying **troponin I** [illegible]
Purified **troponin I** is
[illegible] chromatography on [illegible] exchanger after reversibly protecting the free sulfhydryl groups.
DERWENT CLASS: B04 D16
INVENTOR(S): CONN, G; REARDON, B; ZENG, X; ZHANG, C
PATENT ASSIGNEE(S): (DIOS-N) DIOSYNTH RTP INC
NUMBER OF PATENTS: 89
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
[illegible]					

DESIGNATED STATES: [illegible]

US 2002[illegible]514 A1 20020[illegible]

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO [illegible]	A	WO 2001-[illegible]	[illegible]
AU [illegible]	A	AU [illegible]	[illegible]
US 2002[illegible]514	A1 Provisional	US [illegible]	[illegible]
	Cont of	US 2001-[illegible]	[illegible]
		US 2001-998619	20011130

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU [illegible]	A Based on	WO [illegible]

PRIORITY APPLN. INFO: US 2000-217069P 20000710; US 2001-903398 20010710; US 2001-998619 20011130

AN 2002-154921 [23] WPIDS

AB WO 200204512 A UPAB: 20020402

NOVELTY - Preparing **troponin I**, comprising protecting free sulfhydryl groups of **troponin I** under reducing conditions, and **troponin I** is then purified by subjecting **troponin I** comprising sulfhydryl protecting groups to chromatography, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for **troponin I** comprising sulfhydryl protecting groups.

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Inhibitor of angiogenesis. No supporting data is given.

USE - The method is useful for purifying **troponin I**, particularly recombinant **troponin I**. The highly purified **troponin I**, preferably in a pharmaceutically acceptable form is useful for antibody generation, as a control or standard immunoassay reagent, or to inhibit angiogenesis important in treating various cancers.

ADVANTAGE - Protection of sulfhydryl groups during **troponin I** preparation eliminates the costly need for maintaining non-reducing conditions throughout protein preparation, **purification** and storage, and need for reducing agents. The **sulfhydryl-protected** troponin does not form intrachain or interchain disulfide crosslinks. Overall yield of the purification from multi-step **purification** was greater than 5% at purity levels of greater than 95 . Deprotection of the sulfhydryl groups yields a highly purified product ready for refolding.

Dwg.0/11

[6] ANSWER [illegible] OF 6 IFIPAT COPYRIGHT 2002 IFI

AN [illegible] IFIPAT;IFIUF;IFICP

TITLE: **PURIFICATION** [illegible] **TROPONIN I**

INVENTOR(S): [illegible]; Gregory, Gary, [illegible]
Reardon; Brian, Seattle, WA, US
Zeng; Xianfang, Northborough, MA, US
Zhang; Chenming, Blacksburg, VA, US

PATENT ASSIGNEE(S): Diosynth RTP, Inc.

AGENT: DARBY & DARBY P.C., 805 Third Avenue, New York, NY, [illegible], US

	TYPE	ST	DATE
PATENT INFORMATION:	US 2002064835	A1	20020530
APPLICATION INFORMATION:	US 2001-903398		20010710

	NUMBER	DATE

[illegible] [illegible] Provisional
FAMILY ID PAGE 1:
DOCUMENT TYPE:
Patent Application - First Submitted
FILE SEGMENT: CHEMICAL
APPLICATION
NUMBER OF CLAIMS: 20 11 Figure(s).

DESCRIPTION OF FIGURES:

FIGS. 1A and 1B. A. Proposed reaction for oxidative sulfitolysis. B. Cleavage of disulfide bond by sodium sulfite to form the S-sulfo derivative.
FIG. 2. Preparation and washing of [illegible] inclusion bodies.
FIG. 3. Summary of rTroponin-I preparation.
FIG. 4. Q-Sepharose FF chromatography of **Troponin I**. Buffer A: 6 M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6 M urea, 25 mM Tris-HCl, pH 7.5, 2 M NaCl; Gradient: Step, 0% B for the flow-through and 100 B for the strip; and Flow rate: 150 ml/ min.
FIG. 5. 30 ml Q-sepharose FF chromatography. Buffer A: 6 M urea, 25 mM Tris-HCl, pH [illegible], 100 mM; Buffer B: 6 M urea, 25 mM Tris-HCl, pH [illegible], 2 M NaCl; Gradient: Step, 4 B for elution and [illegible] B for strip; and Flow rate: 20 ml/min.
FIG. 6. SDS-PAGE analysis troponin lot after anion exchange steps no. 1 and no. 2 in 16% tris-glycine gel, under nonreducing conditions. A-H refer to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin Lot 3L4 standard; B. solubilized inclusion bodies; C. sulfitolyzed inclusion bodies (AEX No. 1 load); D. anion exchange no. 1 flowthrough; E. anion exchange no. 1 salt eulate; F. anion exchange no. 2 load; G. anion exchange no. 2 flowthrough; and, H. anion exchange no. 2 130 mM NaCl eluate.
FIG. 7. Toyopearl 650 M (phenyl) HIC chromatograph. Buffer A: 6 M urea, 25 mM Tris-HCl, pH 7.5, 1 M $(NH_4)_2SO_4$; Buffer B: 6 M urea, 25 mM Tris-HCl, pH 7.5; Gradient: Step, 100% B for the flow-through and 0% B for strip; and Flow rate: 10 ml/min.
FIG. 8. SDS-PAGE analysis troponin lot after hydrophobic interaction chromatography in 16% tris-glycine gel, under nonreducing conditions. A-F refers to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin Lot 3L4 standard; B. AEX step no. 2, troponin eulate pool; C. HIC load (w/1M ammonium sulfate); D. HIC flowthrough (troponin product); E. HIC low salt eulate (column strip); F. lot 3L5 sulfitolyzed troponin product.
FIG. 9. Quantitation of rTnI [illegible].
FIG. 10. **Troponin I** LysC mapping.
FIG. 11. SDS-PAGE analysis of sulfitolyzed troponin reduction with dithiothreitol for 45 mins. at ambient temperature. One mg/ ml TnI in 6 M urea, 25 mM tris, 0.15 M NaCl pH 7.5, run on 16% tris-glycine gel. 1. 10., Mark 12 MW Stds; 2. 9., sulfitolyzed TnI; 3. 0.05 mM DTT; 4. 0.10 mM DTT; 5. 0.2 mM DTT; 6. [illegible] mM DTT; 7. 0.5 mMDTT; 8. 1.0 mM DTT.

AB The invention is directed to methods for purifying **Troponin I**, particularly recombinant troponin I produced in a prokaryotic expression system. Recombinant troponin I can be sulfitolyzed by initial after reversibly protecting the free sulfhydryl groups, e.g., by forming sulfates. In a specific example, Tropnin I reacted with sodium tetrafhionate yielded sulfitolyzed Tropnin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. Facile deprotection of the sulfhydryl groups yields a highly purified product ready for refolding.

CLM 20 11 Figure(s).
FIGS. 1A and 1B. A. Proposed reaction for oxidative sulfitolysis. B. Cleavage of disulfide bond by sodium sulfite to form the S-sulfo derivative.
FIG. 2. Preparation and washing of TnI-containing inclusion bodies.
FIG. 3. Summary of rTroponin-I preparation.
FIG. 4. Q-Sepharose FF chromatography of **Troponin I**. Buffer A: 6 M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6 M urea, 25 mM Tris-HCl, pH 7.5, 2 M NaCl; Gradient: Step, 0% B for the flow-through and 100 B for the strip; and Flow rate: 150 ml/ min.
FIG. 5. 30 ml Q-sepharose FF chromatography. Buffer A: 6 M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6 M urea, 25 mM Tris-HCl, pH 7.5, 2 M NaCl; Gradient: Step, 4% B for elution and 100% B for strip; and Flow rate: 20 ml/min.

FIG. 6. SDS-PAGE analysis troponin lot after anion exchange steps no. 1 and no. 2 in 16% tris-glycine gel, under nonreducing conditions. A-H refer to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin Lot 3L4 standard; B. solubilized inclusion bodies; C. sulfitolyzed inclusion bodies [illegible]; D. anion exchange no. 1 flowthrough; E. anion exchange no. 1 salt eulate; F. anion exchange no. [illegible]; G. anion exchange no. 2 flowthrough; and, H. anion exchange no. 2 [illegible] mM NaCl eulate.

FIG. 7. Toyopearl 650 M (phenyl) HIC chromatograph. Buffer A: 6 M urea, 25 mM Tris-HCl, pH 7.5, 1 M (NH4)2SO4; Buffer B: 6 M urea, 25 mM Tris-HCl, pH 7.5; Gradient: Step, 100% B for the flow-through and 0% B for strip; and Flow rate: 10 ml/min..

FIGS. 8. SDS-PAGE analysis troponin lot after hydrophobic interaction chromatography in 16% tris-glycine gel, under nonreducing conditions. A-H refers to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin strip lot 3L4 standard; B. AEX step no. 2, troponin eulate pool; C. HIC load (w/1M ammonium sulfate); D. HIC flowthrough (troponin product); E. HIC low salt eulate (column strip); F. Lot 3L5 sulfitolyzed troponin product.

FIG. 9. Quantitation of rTnI on Zorbax C3.

FIG. 10. **Troponin I** LysC mapping.

FIG. 11. SDS-PAGE analysis of sulfitolyzed troponin reduction with dithiothreitol for 45 mins. at ambient temperature. One mg/ml TnI in 6 M urea, 25 mM tris, 0.15 M NaCl pH 7.5, run on 16% tris-glycine gel. 1. 10., Mark 12 MW Stds; 2. 9., sulfitolyzed TnI; 3. 0.05 mM DTT; 4. 0.1 mM DTT; 5. 0.2 mM DTT; 6. 0.3 mM DTT; 7. 0.5 mMDTT; 8. 1.0 mM DTT.

L67 ANSWER 6 OF 6 IFIPAT COPYRIGHT 2002 IFI

AN	10111508 IFIPAT;IFIUDB;IFICDB
TITLE:	**PURIFICATION** OF HUMAN **TROPONIN I**
INVENTOR(S):	Conn; Gregory, Cary, NC, US Herndon; Brian, Seattle, WA, US Leon; Xiaoliang, Northborough, MA, US Chang; Chenming, Blacksburg, VA, US
PATENT ASSIGNEE(S):	Biosynth RTP, Inc.
AGENT:	DARBY & DARBY P.C., 805 Third Avenue, New York, NY, 10022, US

	NUMBER	PK	DATE
PATENT INFORMATION:	US 20020058145	A1	20020509
APPLICATION INFORMATION:	US 2001-998619		20011130

	APPLN. NUMBER	DATE	GRANTED PATENT NO. OR STATUS
CONTINUATION OF:	US 2001-863898	20010710	PENDING

	NUMBER	DATE
	US 2000-217809P	Provisional, 20000710
FAMILY INFORMATION:	US 20020058145	20020509
DOCUMENT TYPE:	Utility Patent Application - First Publication
FILE SEGMENT:	CHEMICAL APPLICATION
NUMBER OF CLAIMS:	[illegible]

REFERENCE COUNT: [illegible]

FIG. 1A and 1B. A. Proposed reaction for oxidative sulfitolysis. B. Cleavage of disulfide bond by sodium sulfite to form the Ssulfo derivative.

FIG. 2. Preparation and washing of TnI-containing inclusion bodies.

FIG. 3. Summary of rTroponin-I preparation.

FIG. 4. Q-Sepharose FF chromatography of **Troponin I**. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6M urea, 25 mM Tris-HCl, pH 7.5, 2M NaCl; Gradient: Step, [illegible] B for the flow-through and [illegible] for the strip; and Flow rate: 10 ml/min..

FIG. 5. 300 ml Q-Sepharose FF ion exchange chromatography. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6M urea, 25 mM TrisHCl, pH 7.5, 2M NaCl; Gradient: Step, 4% B for elution and 50% B for strip; and Flow rate: 150 ml/min.
FIG. 6. SDS-PAGE analysis troponin I at after anion exchange steps no. 1 and no. 2 in 16% tris-glycine gel, under nonreducing conditions. A-H refer to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin I Lot 3L4 standard; B. solubilized inclusion bodies; C. sulfitolyzed inclusion bodies (AEX No. 1 load); D. anion exchange no. 1 flowthrough; E. anion exchange no. 1 salt eulate; F. anion exchange no. 2 load; G. anion exchange no. 2 flowthrough; and, H. anion exchange no. 2 100 mM NaCl eluate.
FIG. 7. Toyopearl 650M (phenyl) HIC chromatograph. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 1M (NH4)2SO4; Buffer B: 6M urea, 25 mM Tris-HCl, pH 7.5; Gradient: Step, 100% B for the flowthrough and 0% B for strip; and Flow rate: 10 ml/min.
FIG. 8. SDS-PAGE analysis troponin I at after hydrophobic interaction chromatography in 16% tris-glycine gel, under nonreducing conditions. A-H refers to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin I Lot 3L4 standard; B. AEX step no. 2, troponin eulate pool; C. HIC load (w/1M ammonium sulfate); D. HIC flowthrough (troponin product); E. HIC low salt eulate (no ammonium sulfate strip); F. lot 3L5 sulfitolyzed troponin product.
FIG. 9. Quantitation of rTnI on Zorbax C3.
FIG. 10. **Troponin I** LysC mapping.
FIG. 11. SDS-PAGE analysis of sulfitolyzed troponin reduction with dithiothreitol for 45 mins. at ambient temperature. One mg/ml TnI in 6M urea, 25 mM tris, 0.15M NaCl pH 7.5, run on 16% tris-glycine gel. 1.10., Mark 12 MW Stds; 2.9., sulfitolyzed TnI; 3. 6.5 mM DTT; 4. 4.7 mM DTT; 5. 5.1 mM DTT; 6. 3.3 mM DTT; 7. 2.5 mMDTT; 8. 1.0 mM DTT.

AB The invention is directed to methods for purifying **Troponin I**, particularly recombinant Tropnin I produced in a bacterial expression system. Recombinant Tropnin I can be advantageously purified after reversibly protecting the free sulfhydryl groups, e.g., by forming sulfates. In a specific example, Tropnin I reacted with sodium tetrathionate yielded sulfitolyzed Tropnin I, which was purified by chromatography on an anion exchanger, followed by hydrophobic interaction chromatography. Facile deprotection of the sulfhydryl groups yields a highly purified product ready for refolding.

CLMN 20 (1 Figure(s)).

FIGS. 1A and 1B. A. Proposed reaction for oxidative sulfitolysis. B. Cleavage of disulfide bond by sodium sulfite to form the Ssulfo derivative.
FIG. 2. Preparation and washing of TnI-containing inclusion bodies.
FIG. 3. Summary of rTroponin-I preparation.
FIG. 4. Q-Sepharose FF ion exchange of **Troponin I**. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6M urea, 25 mM Tris-HCl, pH 7.5, 2M NaCl; Gradient: Step, 4% B for elution and 50% B for the strip; and Flow rate: 150m./min.
FIG. 5. 300 ml Q-sepharose FF chromatography. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 100 mM; Buffer B: 6M urea, 25 mM TrisHCl, pH 7.5, 2M NaCl; Gradient: Step, 4% B for elution and 50% B for strip; and Flow rate: 150 ml/min.
FIG. 6. SDS-PAGE analysis troponin I at after anion exchange steps no. 1 and no. 2 in 16% tris-glycine gel, under nonreducing conditions. A-H refer to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin I Lot 3L4 standard; B. solubilized inclusion bodies; C. sulfitolyzed inclusion bodies (AEX No. 1 load); D. anion exchange no. 1 flowthrough; E. anion exchange no. 1 salt eulate; F. anion exchange no. 2 load; G. anion exchange no. 2 flowthrough; and, H. anion exchange no. 2 100 mM NaCl eluate.
FIG. 7. Toyopearl 650M (phenyl) HIC chromatograph. Buffer A: 6M urea, 25 mM Tris-HCl, pH 7.5, 1M (NH4)2SO4; Buffer B: 6M urea, 25 mM Tris-HCl, pH 7.5; Gradient: Step, 100% B for the flowthrough and 0% B for strip; and Flow rate: 10 ml/min.
FIG. 8. SDS-PAGE analysis troponin I at after hydrophobic interaction chromatography in 16% tris-glycine gel, under nonreducing conditions. A-H refers to lanes in the SDS-PAGE gel. A. Sulfitolyzed troponin I Lot 3L4 standard; B. AEX step no. 2, troponin eulate pool; C. HIC load (w/1M ammonium sulfate); D. HIC flowthrough (troponin product); E. HIC low salt

eulate (column strip); F. for 3L5 sulfitolyzed troponin product.

FIG. 9. Quantitation of rTnI on Zorbax C8.

FIG. 10. **Troponin I** lysC mapping.

FIG. 11. SDS-PAGE analysis of sulfitolyzed troponin reacted with dithiothreitol for 45 mins. at ambient temperature. One mg/ml TnI in 6M urea, 25 mM tris, 0.15M NaCl pH 7.5, run on 16% tris-glycine gel. 1.MW., Mark 12 MW Stds; 2.9., sulfitolyzed TnI; 3. 0.05 mM DTT; 4. 0.10 mM DTT; 5. 0.2 mM DTT; 6. 0.3 mM DTT; 7. 0.5 mMDTT; 8. 1.0 mM DTT.